In re Application of: Peled et al
Serial No.: 10/649,873
Filed: August 28, 2003
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Examiner: Bruce D. Hissong
Group Art Unit: 1646
Attorney Docket: 26732

In the Claims:

1. (Withdrawn) A peptidic chemokine modulator for modulating a biological effect of a chemokine, comprising a molecule composed of the amino acids H, S, A, L, I, K, R, T and P, and featuring at least 2 Histidines spread along said molecule, wherein said molecule features an overall positive charge (family 1).

2. (Withdrawn) The peptidic chemokine modulator of claim 1, comprising a peptide up to about 20 amino acids in length.

3. (Withdrawn) The peptidic chemokine modulator of claim 2, comprising a peptide from about 10 to about 20 amino acids in length.

4. (Withdrawn) The peptidic chemokine modulator of claim 3, comprising a peptide about 12 amino acids in length.

5. (Withdrawn) The peptidic modulator of claim 1, wherein said molecule comprises a peptide having an amino acid sequence selected from the group consisting of SIFAHQTPTHKN (seq id no:100), SIPSHSIHSAKA(seq id no:101), SAISDHRAHRSH (seq id no:96), SAGHIHEAHRPL (seq id no:95), ACHASLKHRC (seq id no:44), AHSLKSITNHGL (seq id no:46), ESDLTHALHWLG (seq id no:54), HSACHASLKHRC (seq id no:69), WSAHIVPYSHKP (seq id no:143),YATQHNWRLKHE (seq id no:145), CAHLSPHKC (seq id no:1), GVHKHFYSRWLG (seq id no:61), HPTTPIHMPNF (seq id no:66), SVQTRPLFHSHF (seq id no:113), and VHTSLLQKHPLP (seq id no:133).

6. (Withdrawn) The peptidic modulator of claim 5, comprising a peptide having an amino acid sequence showing at least 90% sequence homology to said amino acid sequences.

7. (Withdrawn) The peptidic modulator of claim 6, wherein said sequence homology is about 95%.

8. (Withdrawn) The peptidic modulator of claim 5, wherein said peptide has an amino acid sequence SIFAHQTPTHKN (seq id no:100).

9. (Withdrawn) The peptidic modulator of claim 1, wherein said peptide bindsto a chemokine selected from the group comprising MIG, MCP-1, IL-8, SDF-1 alpha and Eotaxin.

10. (Withdrawn) A peptidic chemokine modulator for modulating a biological effect of a chemokine, comprising a molecule composed of the amino acids H, P, T, L, R, W, F, and featuring at least two neighboring histidines, wherein said molecule features an overall positive charge (family 2).

11. (Withdrawn) The peptidic chemokine modulator of claim 10, comprising a peptide up to about 20 amino acids in length.

12. (Withdrawn) The peptidic chemokine modulator of claim 11, comprising a peptide from about 10 to about 20 amino acids in length.

13. (Withdrawn) The peptidic chemokine modulator of claim 12, comprising a peptide about 12 amino acids in length.

14. (Withdrawn) The peptidic modulator of claim 11, wherein said molecule comprises a peptide having an amino acid sequence selected from the group consisting of GDFNSGHHTTTR (seq id no:59), HHFHLPKLRPPV (seq id no:64), HHTWDTRIWQAF (seq id no:65), LDYPIPQTVLHH (seq id no:76), LLADTTHHRPWP (seq id no:79), TRLVPSRYYHHP (seq id no:126), CHHNLSWEC (seq id no:7) and SFWHHHSPRSPL (seq id no:99).

15. (Withdrawn) The peptidic modulator of claim 14, comprising a peptide having an amino acid sequence showing at least 90% sequence homology to said amino acid sequences.

16. (Withdrawn) The peptidic modulator of claim 15, wherein said sequence homology is about 95%.

17. (Withdrawn) The peptidic chemokine modulator of claim 14, wherein said peptide has an amino acid sequence LLADTTHHRPWP (seq id no:79).

18. (Withdrawn) The peptidic chemokine modulator of claim 1 wherein said modulation of biological effect comprises blocking of inhibition of said biological effect of said chemokine.

19. (Withdrawn) A peptidic chemokine modulator for modulating a biological effect of a chemokine, wherein said molecule comprises a peptide having an amino acid sequence from Table 1.

20. (Withdrawn) The modulator of claim 19, comprising a peptide selected from the group consisting of: QIPQMRILHPYG and HSACLSTKTNIC.

21. (Withdrawn) The peptidic modulator of claim 20, comprising a peptide having an amino acid sequence showing at least 90% sequence homology to said amino acid sequences.

22. (Withdrawn) The peptidic modulator of claim 21, wherein said sequence homology is about 95%.

23. (Withdrawn) A composition for treating a condition involving abnormal cell migration in a subject, the composition comprising a pharmaceutically effective amount of a therapeutic agent for administering to the subject, said therapeutic agent comprising a chemokine modulator according to claim 1.

24. (Withdrawn) The composition of claim 23 wherein said condition comprises an inflammatory condition.

25. (Withdrawn) The composition of claim 23 wherein said condition comprises cancer metastasis.

26. (Withdrawn) The composition of claim 23, wherein said therapeutic agent is administered by topical administration, such that said composition further comprises a pharmaceutically acceptable carrier for topical administration.

27. (Withdrawn) The composition of claim 26, wherein said topical administration is to the skin of the subject.

28. (Withdrawn) The composition of claim 23, wherein said therapeutic agent is administered by inhalation, such that said composition further comprises a pharmaceutically acceptable carrier for inhalation.

29. (Withdrawn) The composition of claim 23, wherein said therapeutic agent is administered intranasally, such that said composition further comprises a pharmaceutically acceptable carrier for intranasal administration.

30. (Withdrawn) The composition of claim 23, wherein said therapeutic agent is characterized by an ability to inhibit binding of the chemokine to a chemokine receptor.

31. (Withdrawn) The composition of claim 23 wherein said therapeutic agent is characterized by an ability to enhance binding of the chemokine to a chemokine receptor.

32. (Withdrawn) A composition for treating a condition involving abnormal cell migration in a subject, the composition comprising a pharmaceutically effective amount of a therapeutic agent for administering to the subject, said therapeutic agent comprising a chemokine modulator according to claim 10.

33. (Withdrawn) The composition of claim 32 wherein said condition comprises an inflammatory condition.

34. (Withdrawn) The composition of claim 32 wherein said condition comprises cancer metastasis.

35. (Withdrawn) The composition of claim 32, wherein said therapeutic agent is administered by topical administration, such that said composition further comprises a pharmaceutically acceptable carrier for topical administration.

36. (Withdrawn) The composition of claim 35, wherein said topical administration is to the skin of the subject.

37. (Withdrawn) The composition of claim 32, wherein said therapeutic agent is administered by inhalation, such that said composition further comprises a pharmaceutically acceptable carrier for inhalation.

38. (Withdrawn) The composition of claim 32, wherein said therapeutic agent is administered intranasally, such that said composition further comprises a pharmaceutically acceptable carrier for intranasal administration.

39. (Withdrawn) The composition of claim 32, wherein said therapeutic agent is characterized by an ability to inhibit binding of the chemokine to a chemokine receptor.

40. (Withdrawn) The composition of claim 32 wherein said therapeutic agent is characterized by an ability to enhance binding of the chemokine to a chemokine receptor.

41. (Withdrawn) A composition for treating a condition involving abnormal cell migration in a subject, the composition comprising a pharmaceutically effective amount of a therapeutic agent for administering to the subject, said therapeutic agent comprising a chemokine modulator according to claim 8.

42. (Withdrawn) The composition of claim 41 wherein said condition comprises an inflammatory condition.

43. (Withdrawn) The composition of claim 41 wherein said condition comprises cancer metastasis.

44. (Withdrawn) The composition of claim 41, wherein said therapeutic agent is administered by topical administration, such that said composition further comprises a pharmaceutically acceptable carrier for topical administration.

45. (Withdrawn) The composition of claim 44, wherein said topical administration is to the skin of the subject.

46. (Withdrawn) The composition of claim 44, wherein said therapeutic agent is administered by inhalation, such that said composition further comprises a pharmaceutically acceptable carrier for inhalation.

47. (Withdrawn) The composition of claim 44, wherein said therapeutic agent is administered intranasally, such that said composition further comprises a pharmaceutically acceptable carrier for intranasal administration.

48. (Withdrawn) The composition of claim 44, wherein said therapeutic agent is characterized by an ability to inhibit binding of the chemokine to a chemokine receptor.

49. (Withdrawn) The composition of claim 44 wherein said therapeutic agent is characterized by an ability to enhance binding of the chemokine to a chemokine receptor.

50. (Withdrawn) A method for treating a disease modulated through and/or caused by binding of a chemokine to a chemokine receptor in a subject, comprising administering a pharmaceutically effective amount of a therapeutic agent

to the subject, said therapeutic agent comprising a peptidic chemokine modulator according to claim 1.

51. (Withdrawn) The method of claim 50 wherein said therapeutic agent binds to at least one of the chemokines and wherein said therapeutic agent directly modulates the activity of the chemokine by modulation of binding to the chemokine receptor.

52. (Withdrawn) The method of claim 50, wherein said disease is selected from the group consisting of: inflammation (primary or secondary), allergy, a non-optimal immune response, an autoimmune reaction (including rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and others), allograft rejection, diabetes, sepsis, cancer and any type of malignant cell growth, acute and chronic bacterial and viral infections, arthritis, colitis, psoriasis, atherosclerosis, hypertension and reperfusion ischemia.

53. (Currently Amended) A method for treating a disease–_modulated through ~~and/~~or caused by binding of a chemokine to a chemokine receptor in a subject, wherein said chemokine is selected from the group consisting of IL-8, MCP-1 and MIG, the method comprising administering a pharmaceutically effective amount of a therapeutic agent to the subject, said therapeutic agent ~~comprising a peptidic chemokine modulator according to claim 10.~~ being a peptidic chemokine inhibitor for inhibiting a biological effect of said chemokine, said peptidic chemokine inhibitor comprises at least two adjacent histidine residues and at least two amino acids selected from the group consisting of the amino acids P, T, L, R, W, and F, and features an overall positive charge, wherein said peptidic chemokine inhibitor comprises a peptide up to about 20 amino acids in length.

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54. (Currently Amended) The method of claim 53, wherein said therapeutic agent binds to at least one of ~~the~~ said chemokines and wherein said therapeutic agent directly inhibit~~modulate~~s the activity of said~~the~~ chemokine by inhibi~~modula~~tion of binding of said chemokine to said~~the~~ chemokine receptor.

55. (Canceled)

56. (Withdrawn) A method for treating a disease modulated through and/or caused by binding of a chemokine to a chemokine receptor in a subject, comprising administering a pharmaceutically effective amount of a therapeutic agent to the subject, said therapeutic agent comprising a peptidic chemokine modulator according to claim 19.

57. (Withdrawn) The method of claim 56 wherein said therapeutic agent binds to at least one of the chemokines and wherein said therapeutic agent directly modulates the activity of the chemokine by modulation of binding to the chemokine receptor.

58. (Withdrawn) The method of claim 56, wherein said disease is selected from the group consisting of: inflammation (primary or secondary), allergy, a non-optimal immune response, an autoimmune reaction (including rheumatoid arthritis, systemic lupus erythematosis, multiple sclerosis and others), allograft rejection, diabetes, sepsis, cancer and any type of malignant cell growth, acute and chronic bacterial and viral infections, arthritis, colitis, psoriasis, atherosclerosis, hypertension and reperfusion ischemia.

59. (Withdrawn) An antibody for binding to a chemokine-binding receptor, comprising: an antibody being capable of recognizing at least a portion of a chemokine-binding receptor, wherein said antibody also recognizes a peptide having a sequence according to claim 1.

60. (Withdrawn) A vaccine formed with the antibody of claim 59.

61. (Withdrawn) An antibody for binding to a chemokine-binding receptor, comprising: an antibody being capable of recognizing at least a portion of a chemokine-binding receptor, wherein said antibody also recognizes a peptide having a sequence according to claim 10.

62. (Withdrawn) A vaccine formed with the antibody of claim 61.

63. (Withdrawn) An antibody for binding to a chemokine-binding receptor, comprising: an antibody being capable of recognizing at least a portion of a chemokine-binding receptor, wherein said antibody also recognizes a peptide having a sequence according to claim 19.

64. (Withdrawn) A vaccine formed with the antibody of claim 63.

65. (Withdrawn) A method for producing an antibody, comprising:

inducing formation of antibody against a peptide having a sequence according to claim 1, wherein said antibody is also capable of recognizing a chemokine-binding receptor.

66. (Withdrawn) The method of claim 65, wherein said antibody comprises a monoclonal antibody.

67. (Withdrawn) The method of claim 65, wherein said antibody comprises a polyclonal antibody.

68. (Withdrawn) The method of claim 65, wherein said antibody forms a vaccine.

69. (Withdrawn) A method for producing an antibody, comprising:

inducing formation of antibody against a peptide having a sequence according to claim 10, wherein said antibody is also capable of recognizing a chemokine-binding receptor.

70. (Withdrawn) The method of claim 69, wherein said antibody comprises a monoclonal antibody.

71. (Withdrawn) The method of claim 69, wherein said antibody comprises a polyclonal antibody.

72. (Withdrawn) The method of claim 69, wherein said antibody forms a vaccine.

73. (Withdrawn) A method for producing an antibody, comprising:

inducing formation of antibody against a peptide having a sequence according to claim 19, wherein said antibody is also capable of recognizing a chemokine-binding receptor.

74. (Withdrawn) The method of claim 69, wherein said antibody comprises a monoclonal antibody.

75. (Withdrawn) The method of claim 69, wherein said antibody comprises a polyclonal antibody.

76. (Withdrawn) The method of claim 69, wherein said antibody forms a vaccine.

77. (New) The method of claim 53, wherein said peptidic chemokine inhibitor comprises a peptide being from about 10 to about 20 amino acids in length.

78. (New) The method of claim 77, wherein said peptidic chemokine inhibitor comprises a peptide being about 12 amino acids in length.

79. (New) The method of claim 53, wherein said peptidic chemokine inhibitor comprises a peptide having an amino acid sequence selected from the group consisting of GDFNSGHHTTTR (seq id no:59), HHFHLPKLRPPV (seq id no:64), HHTWDTRIWQAF (seq id no:65), LDYPIPQTVLHH (seq id no:76), LLADTTHHRPWP (seq id no:79), TRLVPSRYYHHP (seq id no:126), CHHNLSWEC (seq id no:7) and SFWHHHSPRSPL (seq id no:99).

80. (New) The method of claim 79, wherein said peptidic chemokine inhibitor comprises a peptide having an amino acid sequence showing at least 90% sequence homology to said amino acid sequences.

81. (New) The method of claim 80, wherein said sequence homology is about 95%.

82. (New) The method of claim 53, wherein said peptidic chemokine inhibitor comprises a peptide having an amino acid sequence selected from the group consisting of HHFHLPKLRPPV (seq id no:64) and LDYPIPQTVLHH (seq id no:76).